

METHODS AND APPARATUS FOR JOINING PIECES OF  
THERMOPLASTIC MATERIAL TO FORM CELLULAR BLOCKS

ABSTRACT OF THE DISCLOSURE

5           A carrying mechanism repeatedly obtains pieces of thermoplastic material from a  
supplying mechanism and provides them to a forming mechanism, where they are welded  
together to form a cellular block. In the forming mechanism, the piece to be added to the  
block and the piece most recently previously added to the block are arranged in opposing  
face-to-face relation, and then they are welded together by contemporaneously forming  
10 multiple spaced apart and elongate welds therebetween. The welding is performed by  
positioning heating elements between the piece to be added to the block and the piece  
most recently previously added to the block to heat laterally spaced apart strips of these  
pieces, withdrawing the heating elements, and at the same time rolling welding  
mechanisms along the strips so that the strips are nipped between the rolling welding  
15 mechanisms and other welding mechanisms.

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